REMARKS

Overview

Claims 76-89 currently stand allowed. The Examiner also responded in the prior Office Action as follows: rejected claims 51-53, 55, 57-62, and 66-75 under 35 U.S.C. § 102(b) as being anticipated by Toyouchi et al. (U.S. Pat. No. 6,006,251); rejected claims 90-103 and 105-131 under 35 U.S.C. § 102(b) as being anticipated by Theimer et al (U.S. Pat. No. 5,611,050); and rejected claim 104 under 35 U.S.C. 103(a) as being unpatentable over Theimer in view of Schmidt et al., "There Is More To Context Than Location," Nov. 1998.

Applicants hereby amend claims 51, 66, 74, 75, 90 and 127 in order to clarify the subject matter of their invention, and further hereby add new claims 132-143. Thus, claims 51-53, 55, 57-62 and 66-143 are pending.

Discussion

Applicants thank the Examiner for his indication of the allowable subject matter of claims 76-89.

The Examiner has rejected each of the other previously pending claims under 35 U.S.C. §§ 102 or 103 as being unpatentable over Toyouchi or Theimer, either alone or in combination with Schmidt. However, each of the pending claims as rejected includes features and provides functionality not disclosed by any of these references, and thus is allowable. For example, previously pending independent method claim 90 recited "receiving indications of multiple characterization modules that each model a current state related to a computer on which that characterization module executes, each modeled current state represented with at least one attribute", and previously pending independent claims 127, 130 and 131 each recited similar language. However, while the Examiner asserts that Theimer's 'UserAgentA' and 'UserAgentB' are "characterizing modules . . . that each model a current state related to a computer (portable computer 64 and terminal 66) on which that characterization module executes" (Office Action dated September 23, 2004, page 9), Theimer instead makes clear that each 'UserAgent' represents a user of the overall system, and that each user may move

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about and interact with various devices. (Theimer, 8:14-28, 8:62-9:8.) Thus, since Theimer's UserAgents do not model a current state related to a computer on which they execute, such UserAgents of Theimer cannot anticipate these recited claim elements.

Moreover, the pending claims as amended include various additional distinctions from the cited references that render the claims allowable. As one example, independent claims 51, 90 and 127 as amended each recite not only the use of values of attributes for a modeled state or context, but also the use of additional descriptive meta-information for those values, with dependent claims 137 and 138 further indicating that the additional descriptive information for an attribute value may include information such as an uncertainty of the value, an accuracy of the value, a time at which that value is most accurate, etc. For example, independent claim 90 as amended recites "each modeled current state represented with multiple attributes each having one or more values, at least some of the attribute values each having associated additional information that describes that attribute value" and "the determining [of the need for access to a resource accessible to one of the computers on which one of the characterization modules is executing] based at least in part on one or more of the values of the multiple attributes that represent the modeled current state for the one characterization module and on the associated additional information for at least one of the one or more attribute values". Such meta-information may be particularly beneficial, for example, in situations in which various sources may supply information with widely varying degrees of accuracy or timeliness or measurement units (e.g., by measuring distance in meters versus feet). However, Theimer does not appear to include any teaching, suggestion or motivation for generating and using such meta-information for attribute values in any manner, let alone in the manners claimed, and Toyouchi and Schmidt do not appear to remedy this deficiency. Thus, claims 51, 90 and 127 as amended are each patentable over the cited references for at least this reason, and claims 52-53, 55, 57-62, 91-126, 128-129 and 132-138 that depend from these claims are also each patentable for at least the same reason.

As another example, independent claim 75 as amended generally recites an information supplier module that caches context attribute values that are received from sources, and that satisfies clients by using appropriate cached attribute values if they

are available, or by obtaining information from local sources or with resources of other computers if appropriate cached attribute values are not available, and new claim 133 that depends from claim 51 recites similar language. Such caching of information may be particularly beneficial, for example, in situations in which the availability of various sources and resources is frequently changing, as well as when it is desirable to response to clients in a particularly rapid fashion. While Toyouchi appears to respond to clients requests for information by dynamically retrieving information from other sources, Toyouchi does not appear to teach, suggest or motivate using cached attribute values in the manners claimed, nor any of various types of functionality to support cached values (*e.g.*, determining when values are valid and when they should be discarded), and Theimer and Schmidt do not appear to remedy this deficiency. Thus, claim 75 as amended and claim 133 are each patentable over the cited references for at least this reason.

In addition, independent claim 74 as amended generally recites that sources of information push context attribute values to an intermediary when the context attribute values change, and that the intermediary determines whether to push the received context attribute values on to clients, such as based on prior requests from the clients, and new claim 132 that depends from claim 51 recites similar language. Such pushing of information may be particularly beneficial, for example, in situations in which numerous context attribute values from various sources are frequently changing. While Toyouchi appears to respond to clients requests for information by dynamically retrieving information from other sources, Toyouchi does not appear to teach, suggest or motivate pushing attribute values to clients in the manners claimed, and Theimer and Schmidt do not appear to remedy this deficiency. Thus, claim 74 as amended and claim 132 are each patentable over the cited references for at least this reason.

In addition, new independent claim 139 generally recites that the ability to obtain context attribute values using resources of other computers may dynamically occur after other sources have already been used, such as based on the other computer becoming accessible, and that such dynamically available resources of other computers may be used to obtain attribute values. Such incorporation of capabilities that become dynamically available may be particularly beneficial, for example, in situations in which

the availability of various resources and other computers is frequently changing. However, Toyouchi, Theimer and Schmidt do not appear to include any teaching, suggestion or motivation for identifying and using such dynamically available resources of other computers in the manners claimed. Thus, new claim 139 is patentable over the cited references for at least this reason, and claim 140 that depends from claim 139 is similarly patentable for at least the same reason.

In addition, new independent claim 141 generally recites that clients specify one or more sources from which they desire to receive values for a context attribute of interest, and that context attribute values are provided to the clients from the specified sources when possible and are provided using resources of other computers when it is not possible to use the specified sources. Such use of specified sources when available and resources of other computers otherwise may be particularly beneficial, for example, in situations in which the availability of various sources and resources is frequently changing. However, Toyouchi, Theimer and Schmidt do not appear to include any teaching, suggestion or motivation for using such client-specified sources and other resources of other computers in the manners claimed. Thus, new claim 141 is patentable over the cited references for at least this reason, and claims 142-143 that depend from claim 141 are similarly patentable for at least the same reason.

As previously noted, the pending dependent claims include the features of those claims from which they depend, and are thus allowable for the same reasons as those claims. Moreover, the pending dependent claims also recite additional features lacking in the cited references, and are thus allowable on the basis of those features as well, although various of these additional features are not enumerated here for the sake of brevity.

Conclusion

In light of the above remarks, Applicants respectfully submit that all of the pending claims are allowable. Applicants therefore respectfully request the Examiner to reconsider this application and timely allow all pending claims. If the Examiner has any

questions or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to call the undersigned at (206) 694-4815.

Respectfully submitted,

SEED Intellectual Property Law Group PLLC

James A. D. White
Registration No. 43,985

JDW:mxt

701 Fifth Avenue, Suite 6300
Seattle, Washington 98104-7092
Phone: (206) 622-4900
Fax: (206) 682-6031

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